



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/313.659 05/18/99 YANG

W SEC. 636

EXAMINER

MMC1/0125

JONES AND VOLENTINE LLP  
SUITE 150  
12200 SUNRISE VALLEY DRIVE  
RESTON VA 20191

ART UNIT

PAPER NUMBER

2814  
DATE MAILED:

01/25/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

09/313,659

Applicant(s)

YANG ET AL.

Examiner

Steven H. Rao

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 15 November 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

## Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

### DETAILED ACTION

Applicants' amendment filed November 15, 2000 has been entered on November 16, 2000 and the Supplemental Amendment filed January 03, 2001 has been entered on January 05, 2001. Therefore claims 1, 7, 9, 10, 12, 14, 18 and 19 as amended by the amendments and claims 2-6, 8, 11, 13, 15-17 as originally filed are currently pending in the application.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 9 and 19 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. By the amendment of November 15, 2000 applicants added the, " boron fluoride(  $\text{BF}_2$ ) " the boron fluoride(  $\text{BF}_2$ ) ( sic.) is not supported by the specification as originally filed.

The Office notes for the record that  $\text{BF}_2$  is commonly referred to as Boron di fluoride and not Boron fluoride.

Further more the specification as originally filed only discloses Boron ( B) or  $\text{BF}_3$  ( Boron tri fluoride).

The proposed amendment of the specification page 14 line 9 is also objected to for the same reason stated above , namely boron di fluoride is not supported by the specification as originally filed.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 –4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi(5654213 herein after Choi) and Kashihara (5567964 herein after Kashihara) as previously applied , and further in view of Dennison et al. ( U.S. Patent No. 5534449, herein after Dennison) listed by the applicants' in their lds of October 31, 2000 ( Paper No. 5).

With respect to Claims 1-4 , as previously stated Kashihara and Choi describe a method of fabricating MOS transistor with double side wall spacers in p-well and Single sidewall spacers in the n-well region .

Kashihara and Choi does not specifically disclose implanting a third impurity ions of a low concentration into a third portion of semiconductor substrate.

However Dennison in col. 3lines 65-col.4 lines 5 describes a third implant of a third impurity ions ( phosphorous) of a low concentration onto a third portion of the semiconductor surface.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Dennison with those of Choi and Kashihara as suggested above i.e. include Dennison's third implant of a third impurity ions of a low concentration into a third portion of a semiconductor substrate to form peripheral NMOS transistor LDD regions.

Therefore claims 1-4 are rejected for reasons previously stated and those above.

Claims 5,6 and 8 were stated to be allowable as they depend from allowable claim 1.

However as shown above claim 1 is not allowable and therefore claims 5,6 and 8 are rejected over Choi, Kashihara, Kim (as previously stated) and Dennison (above).

Claims 7 and 9 contain new matter and are rejected under 112 (see above) claims 7 and 9.

It is noted that the Response filed November 15, 2000 (Paper No. 7) on page 5 states that claim 14 has been amended, however a correct reading shows that claim 14 as allegedly amended recites the claim 1 4 as originally filed without any changes.

Claims 10-19 were stated to be allowable because claims 10-14 dependent on claim 1. Independent claim 15 was said to allowable because it contains the same limitation as claim 1 and claims 16-19 depend on claim 15.

As shown above claim 1 is not allowable and therefore claim 15 is also not allowable over Choi, Kashihara, Kim (as previously stated) and Dennison (above).

As claim 15 is not allowable and therefore claims 16-19 are also not allowable over Choi, Kashihara, Kim (as previously stated) and Dennison (above).

***Response to Arguments***

Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven H. Rao whose telephone number is 703-306-5945. The examiner can normally be reached on M-F, 8.00 to 5.00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 703- 306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7724 for After Final communications.


Application/Control Number: 09/313,659  
Art Unit: 2814

Page 6

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703- 308-0956.

  
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January 23, 2001

  
OLIK CHAUDHURI  
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